



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/775,886

02/10/2004

Naoto Matsunami

81940.0070

1418

24956 7590 01/04/2007
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.
1800 DIAGONAL ROAD
SUITE 370
ALEXANDRIA, VA 22314

EXAMINER

PATEL, KAUSHIKKUMAR M

ART UNIT

PAPER NUMBER

2188

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

01/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/775,886

Applicant(s)

MATSUNAMI ET AL.

Examiner

Kaushikkumar Patel

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-41 and 44-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-41 and 44-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to applicant's communication filed on October 20, 2006 in response to PTO office action mailed August 10, 2006. The applicant's remarks and amendments to the claims were considered with the results that follow.
2. In response to the last office action, claims 32-41, 44-49 and 51 have been amended. Claims 28-31, 42-43 and 52-53 have been canceled. No claims have been added. As a result, claims 32-41 and 44-51 remain pending in this application.
3. The objections to claims have been withdrawn due to amendments filed on October 20, 2006.
4. The rejection of claims under 35 U.S.C. 112, second paragraph is withdrawn due to amendments filed on October 20, 2006.
5. The rejection of claims under 35 U.S.C. 112, first paragraph is maintained and reiterated below for applicant's convenience.

Response to Arguments

6. Applicant's arguments filed October 20, 2006 have been fully considered but they are not persuasive.
7. Applicant submitted a verified translation of the foreign priority document to overcome rejection of Leung et al. (US 2004/0039891) reference, but as admitted by applicant in remarks section, page 13, Leung et al. '391 reference is continuation-in-part of application ser. No. 10/232,875 and was published as US 2003/0046270 and

examiner is using Leung et al. '891 reference on teaching of migrating a file/data based on policies set by the administrator (or host), which was also disclosed in '270 reference, thus at least for limitation of "migrating files based on policies set by the administrator (host)" Leung '891 reference is still valid.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 32-41 and 44-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As per claims 39 and 41, the limitations "the open request including information of a policy, which is set by an application creating the file" and "the open request including information of a policy set for the file by an application creating file" are not described in the specification. Careful review of specification revealed that the user or the application that created the file apply the policies to files (see specification page 22, lines 16-18). There is no disclosure of how these policies are created and applied to the files by the application that created the files. According to the fig. 11 and related description in specification of present application, the application, which created a file, is

Art Unit: 2188

kept as an attribute of the file with the file metadata. The review of present application specification, pages 22-26, reveals that the policies are set by the host and it is applied per application basis but not by the application creating the file and thus the claims are treated accordingly in this office action.

Claims 32-38 and 44-51 are also rejected due to their dependency on rejected claims.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 32-35, 37, 39-41, 44-48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al. (US 2004/0039891 A1)/(Leung et al. US 2003/0046270 A1, incorporated by Leung '891 reference, the teaching is relied upon is file migration based on policies set by user/administrator as admitted by applicant in remark section of applicant's response filed on October 20, 2006) and further in view of Devarakonda et al. (US 2003/0225801 A1) and Noveck et al. (US 6,757,695 B1).

As per claims 39 and 41, Leung teaches a file migration method between a first system and second system (Leung teaches storage environment comprising multiple servers coupled to one or more storage units and also using hierarchical storage management using source and target storage units, par. [0007]-[0010]),

The method comprising steps of:

at the first file system, receiving an open request from the computer for storing a file in the first file system, storing the file in the first file system (this is inherent in the system of Leung because, when ever a new file is created or file is opened, the file system must receive the file open/store request);

migrating the file from the first file system to the second system according to policy (Leung, pars. [0013], [0027], [0047]);

leaving information indicating a migration destination of the migrated file and information indicating attributes of the file in the first file system (Leung teaches that migration of file involves moving a file from its original location on a source storage unit to a target storage unit. A stub or tag file may be stored on the source storage unit in place of migrated file. The stub file generally comprises metadata related to the migrated file and information that can be used to determine the target storage location of migrated file (pars. [0009], [0027]).

Leung fails to teach applying policy based on the application creating the file and hence also leaving information of application creating file. Devarakonda teaches applying policies based on the application creating the file (Devarakonda, par. [0009], [0022] and [0027]). It would have been obvious to one having ordinary skill in the art at the time of the invention to apply polices based on the application creating the file as taught by Devarakonda in the system of Leung because each application has different requirements of data/files and different access patterns and by setting polices based on application creating files improves the system performance (Devarakonda, pars. [0027]

Art Unit: 2188

– [0028]). Devarakonda also teaches applying different attributes to files (Devarakonda, figs. 1 and 5, par. [0022]), which can be used as stub file metadata (attributes of application creating the file) left in source storage device taught by Leung as above.

With respect remaining limitations from preamble of claim, first and second file access controllers, plurality of magnetic disks and file systems, Leung teaches, hierarchical storage system, RAID storage system, NAS and SAN systems with physical and logical storage units (par. [0031]-[0032]) and networked system (par. [0034]). Controlling an access to files using file access controller and creating logical units on a plurality of disks is known in the art (see Novack teaches system as described in preamble of the claim, figs. 1 and 2, and their related description). Arranging storage system as taught by Novack provides reliable, stable and redundant system (see Noveck, col. 4, lines 43-52):

As per claims 40 and 44, Leung teaches logical and physical storages with volumes (par. [0031]-[0033]) and moving files from one volume to other volume inherently teaches moving from one logical unit to other logical unit. Leung and Devarakonda teach leaving stub file metadata in the source storage device as explained with respect claim 39 above.

As per claims 32-33, 35, 45-46 and 48, Leung teaches leaving a stub file with metadata (file name, file size, file type and access permissions are known metadata of the file) and destination location of migrated file (par. [0027], [0089], [0107]), which inherently teaches leaving a file name in the source storage (renaming a file in

Art Unit: 2188

destination storage do not provide any advantage or improvement of the prior art, but instead requires more metadata and hence not given any patentable weight).

As per claims 34 and 47, Leung teaches file I/O driver module intercepting file requests from users and determines location of migrated file and file I/O driver restores the file (par. [0110]-[0111]). Intercepting and restoring file inherently requires sending access request to second file access controller because migrated file resides on second storage unit.

As per claims 37 and 50, Leung teaches migrating file from source storage unit to target storage units as explained above in claim 39, which inherently requires reading file from source storage and writing it into destination storage.

12. Claims 36, 38, 49 and 51 are rejected under **35 U.S.C. 103(a)** as being unpatentable over Leung, Devarakonda and Noveck et al. (US 6,757,695 B1) as applied to claims 39 and 41 above and further in view of Edsall et al. US 2004/0139167 A1.

As per claims 36 and 49, Leung fails to teach NFS or CIFS, but his file migration method can be implemented on storage area networks (SAN) or network storage systems (NAS) (par. [0031]). NFS or CIFS are well known protocols allow users to access and share files and directories on a network as if they were local (see Edsall et al. US 2004/0139167 A1, par. [0006], Edsall teaches NAS with NFS and CIFS is known in the art). It would have been obvious to one having ordinary skill in the art at the time

of the invention to utilize NFS or CIFS protocol in the system of Leung to allow users seamless access to files and directories.

Claims 38 and 51 are rejected under same rationales as applied to claims 36 and 49 above.

Conclusion

13. The prior art made of records and not relied upon is considered pertinent to applicant's disclosure.

Mu et al. teaches migrating files based on polices and leaving metadata information in source storage as tracking information.

Saake et al. teaches file migration and leaving stub file.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2188

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

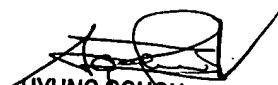
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaushikkumar Patel whose telephone number is 571-272-5536. The examiner can normally be reached on 8.00 am - 4.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


kmp

Kaushikkumar Patel
Examiner
Art Unit 2188


HYUNG SOUGH
SUPERVISORY PATENT EXAMINER
12/29/06